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ABSTRACT

The promotion of academic success has been linked to children's social and emotional wellness, reduction in risky behaviors, and promotion of social and emotional competence. This chapter briefly summarizes the evidence regarding the link between academic performance and health risk behaviors, including substance abuse, delinquency, teen sexual activity, and violence. The evidence suggests that the promotion of academic success in children vulnerable to health risk behaviors may reduce the likelihood of these behaviors. Next, evidence is summarized regarding the mechanisms found in descriptive studies to characterize schools that are effective in promoting children's academic performance. A theory of behavior, the social development model, is outlined to organize this evidence on effective schools. The theory provides an example of a framework that can be used to select and implement school and classroom practices to promote the development of academic, social, and emotional competence in children. Finally, examples of practices that have been shown in intervention studies to be effective in promoting academic, social, and emotional competency are presented in the context of the theory. Contains 64 references. (SD)

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Academic Performance and School Success: Sources and Consequences

J. DAVID HAWKINS

ED 416 968

The promotion of academic success in children is a national health goal (U. S. Department of Health and Human Services, Public Health Service [DHHS], 1991). Goal 8.2 of *Healthy People 2000* is to "increase the high school completion rate to at least 90 percent, thereby reducing risks for multiple problem behaviors and poor mental and physical health" (p. 253).

Promoting academic success has been designated as a national health goal because the available evidence suggests that academic success during childhood can be key to social and emotional wellness. Research indicates that academic success can reduce involvement in health risk behaviors that can compromise all forms of wellness (Dryfoos, 1990). *Healthy People 2000* (DHHS, 1991) states, "By addressing high school dropout rates as part of the nation's health promotion and disease prevention agenda, it may be possible to reduce unwarranted risk of problem behavior and improve the health of our young people" (p. 254). Moreover, certain methods of management and instruction in classrooms have been shown to accomplish the goals of both promoting academic success and promoting social and emotional competence. Teachers should learn and use these methods in classrooms to maximize the academic, social, and emotional skills of their students.

Finally, there is some evidence that the promotion of social and emotional competence in children can positively affect their aca-

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demic performance. This evidence suggests that although often ignored in "back to the basics" movements in education, the promotion of social and emotional competence and the promotion of academic competencies are mutually reinforcing activities. Both should be included in the goals of schools.

This chapter briefly summarizes the evidence regarding the link between academic performance and health risk behaviors, including substance abuse, delinquency, teen sexual activity, and violence. This evidence suggests that the promotion of academic success in children vulnerable to health risk behaviors may reduce the likelihood of these behaviors. Next, the evidence regarding the mechanisms found in descriptive studies to characterize schools that are effective in promoting the academic performance of children is summarized. Then, a theory of behavior, the social development model, is outlined to organize this evidence on effective schools. The theory provides an example of a framework that can be used to select and implement school and classroom practices to promote the development of academic, social, and emotional competence in children. Finally, examples of practices that have been shown in intervention studies to be effective in promoting academic, social, and emotional competency are described in the context of the theory.

Predictors of Health Risk Behaviors

A number of factors have been shown to predict health risk behaviors during adolescence (see Dryfoos, 1990; Hawkins, Arthur, & Catalano, 1995; Institute of Medicine, 1994). Four of these are of interest here. Contextually, extreme economic disadvantage or poverty has been shown to increase risk for health risk behaviors such as crime (Dryfoos, 1990; Farrington, 1991; Institute of Medicine, 1994). Second, independent studies in different countries and cultures have shown that persistent physically aggressive behavior in the early elementary school grades (including fighting and bullying) predicts later crime, violence, and substance abuse (Farrington, 1991; Institute of Medicine, 1994; Kellam, Rebok, Ialongo, & Mayer, 1994; Robins, 1978). Finally, independent

studies have found both academic failure and low commitment to schooling to increase risk for later substance abuse, delinquency, school dropout, teen pregnancy, and violence (see Dryfoos, 1990; Hawkins, Catalano, & Miller, 1992; Institute of Medicine, 1994; Maguin & Loeber, 1996). In their meta-analysis of the relationship of academic performance and delinquency, Maguin and Loeber found that academic performance makes an independent contribution to delinquency even after the effects of socioeconomic status or prior conduct problems are controlled.

Characteristics of Effective Schools

Simultaneous with the development of research on predictors of health risk behaviors has been a growing body of research on effective schools (for reviews, see Levine & Lezotte, 1990; Mortimore, 1995). Descriptive studies have shown specific mechanisms to be associated consistently with schools that are effective in producing better academic outcomes for students than would be expected from students' background characteristics.

Just as they are at greater risk for health risk behaviors, children raised in poverty are less likely to achieve academic success than are children of middle- and upper-class families (Mortimore, 1995). Schools must be effective in educating children of low-income families. Such children are more likely to be of ethnic minority status than the general population and more likely to be raised by a single female parent. Schools that can effectively ensure that these children succeed academically reduce their risks for health risk behaviors.

There is consistent evidence "that individual schools can promote positive or negative student outcomes; that those outcomes can include both cognitive and social behaviors; and that they are not dependent on the school receiving a favored student intake" (Mortimore, 1995, p. 341). What are the characteristics of schools that are effective in promoting learning and academic achievement? Mortimore has summarized eight that appear consistently across studies across continents. I have rearranged the order, but not the content, of Mortimore's list

1. Strong positive leadership of the school
2. Academic emphasis and a focus on learning
3. High expectations
4. The use of joint planning and consistent approaches toward students (consistent expectations)
5. Students' active involvement in schooling and school life
6. Parental involvement in the life of the school
7. Monitoring of student progress
8. Rewards and incentives (pp. 346-352)

Focused on a similar task, the Task Force on Defining a Disciplined Environment Conducive to Learning of the National Education Goals Panel (1995) identified the following key characteristics of effective school environments:

1. Clear discipline standards are provided that are firmly, fairly, and consistently enforced.
2. Staff express high performance expectations and demonstrate commitment to the academic success of all students.
3. The development of personal responsibility [and] social and emotional competence are promoted among students and staff.
4. Opportunities and incentives exist for all students and staff to become actively and continuously engaged in the learning process.
5. Reinforcement and recognition are given for students' and staff's efforts in the pursuit of learning.
6. Staff show concern and support for their students' intellectual and personal development.
7. Families and the larger community are successfully engaged in the work of the school and the education of their children.
8. The physical environment is safe, well-maintained and welcoming. (pp. 2-3)

Other reviews of the characteristics of effective schools have reached similar conclusions (Levine & Lezotte, 1990). The evidence suggests that if schools could successfully integrate all these characteristics into their operations, they would be more successful in educating their students.

Toward a Theory of Academic Performance and Social Development

Theory is needed to provide a framework for understanding how these characteristics interrelate in producing academic success and a commitment to learning. Theory can organize the existing evidence on the predictors of academic outcomes into plausible causal models. Theory is needed, ultimately, to guide the development, implementation, and testing of effective practices.

My colleagues and I have been working on a theory of human behavior, the social development model, for a number of years (Catalano & Hawkins, 1996; Hawkins & Weis, 1985). In this section, the social development model is used to link the current evidence on effective schools into a theoretical framework for both understanding and action to promote academic success.

The social development model seeks, ultimately, to explain why both healthy and health risk behaviors emerge during development. Here, the processes that relate to the promotion of academic success are described. I also seek to show how the promotion of academic success and of social, emotional, and physical health can be promoted through the use of the same theoretically specified processes or mechanisms. (For a complete exposition, see Catalano & Hawkins, 1996.)

Behavior is the product of the interaction between the individual and the environment (Hawkins & Weis, 1985; Moffitt, 1993). Generic processes of social development recur in different environments during the life course of the developing individual. From ages 6 to 18, schools are a major social environment experienced by children. Children who develop a commitment to succeed in school and who feel a sense of attachment to school and to their teachers are more successful academically than other children (Harachi, Abbott, Catalano, & Haggerty, 1996). Commitment and attachment are elements of a social bond to school.

The emphasis on the importance of social bonding is derived from Hirschi's (1969) theory of social control. Criminological research has shown that children who develop a bond of commitment and attachment to school are less likely to engage in serious crime and other health risk behaviors including violence and substance abuse (Hawkins, Catalano, & Miller, 1992; Hirschi, 1969; Maguin & Loeber, 1996). Similarly, Maguin and Loeber report that

academic success has been shown across studies to protect against health risk behaviors during adolescence.

The social development model hypothesizes that bonding to school (i.e., commitment and attachment to schooling) is important both in promoting later academic achievement and in preventing health risk behaviors. The model hypothesizes that academic achievement contributes developmentally to later levels of bonding to school as well as to the prevention of health risk behaviors.

Bonding to school is, itself, the product of a process of interaction between the developing child and the school environment. The level of bonding between the individual child and the school depends on three elements. First is the degree to which the school itself provides opportunities to the developing child for active involvement in the educational process. Active student involvement in schooling is one of the characteristics of effective schools. Opportunities for active participation should be developmentally appropriate to the child's current level of skills to motivate the child to engage in the learning process (Csikszentmihalyi & Larson, 1980).

Skills or competencies are the second element in the interactive process by which bonding develops. Cognitive, as well as social and emotional, skills must be considered. Individual variation in intellectual skills is widely recognized (Herrnstein & Murray, 1994), but skills vary on a number of dimensions (Gardner, 1993; Goleman, 1995). To the extent that individuals possess and use behavioral, cognitive, emotional, and interpersonal skills required in confronting a particular opportunity in school, they are more likely to experience the opportunity as positive, both as a result of the internal satisfaction derived from the experience (Csikszentmihalyi & Larson, 1980) and as a result of the external reinforcement from the environment made more likely by a skillful performance.

In the social development model, reinforcement or recognition for skillful involvement is the third element in the process by which bonding to school develops. (See Mortimore, 1995, for a discussion of the role of rewards and incentives as mechanisms for eliciting positive behaviors.)

Since Plato set out to train youth in how to find pleasure in action that strengthens, rather than weakens, the bonds of human solidarity, the creation of social bonding has, itself, been a goal of education (Csikszentmihalyi & Larson, 1980). School personnel, and

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teachers in particular, have a great deal of influence over the degree to which children develop a bond to school, that is, over the degree to which they become committed to learning and like school and teachers. Teachers control the opportunity structure confronted by children through their selection of curriculum materials, their choice of methods for managing the classroom, and their choice of methods of instruction. Teachers also control many of the reinforcements experienced by students through the methods of classroom management and instruction they use. The job of teachers is to provide an opportunity and reinforcement system that promotes the development of desired skills in children. Success in that endeavor creates strong bonding to school. Commitment to educational pursuits and attachment to school motivate behaviors that are conducive to academic achievement. Strong bonding to school provides the motivation to work hard to live up to the norms or expectations held by school personnel.

To the extent that school personnel hold and communicate clear norms regarding high educational expectations for children in that school, these norms are likely to encourage children who are bonded to school to engage in behaviors consistent with learning, such as completing assignments. I will return to this topic of norms or standards for behavior later.

To this point, I have discussed the process by which bonding to school develops. Yet opportunities for active involvement, skills for participation, and reinforcement for skillful participation are elements in the process by which bonding develops to any social group, whether that group is a school class, a family, a group of peers, or a delinquent gang. This process can occur regardless of whether a group holds norms favorable or unfavorable to learning.

An alternative system of opportunity and reinforcement exists, in varying degrees, in the social environments of developing children and adolescents. Opportunities to engage in aggressive behavior and reinforcement for doing so are sometimes offered in the interactions of family members (Patterson, 1982, 1986) and peers (Pepler, Craig, & Roberts, 1995). Although some patterns of violent interaction may be learned (Patterson, 1982), aggressive and violent behaviors do not require the development of complex or difficult skills.

Individual constitutional differences affect both academic performance and the propensity to engage in health risk behaviors. It is

hypothesized that these differences manifest themselves in differential perceptions of opportunities, differential levels of skills, and different perceptions regarding reinforcement among individuals (see Catalano & Hawkins, 1996). In general, the extent to which individuals engage in behaviors consistent with academic achievement or in health risk behaviors is influenced, in part, by the relative balance of opportunities, skills, and reinforcements they experience during development.

To the extent that individuals develop bonds of commitment and attachment to individuals and social groups that hold high expectations for learning and achievement, they are more likely to pursue academically focused activities. To the extent that they do not develop such bonds, they are less constrained from substance use, crime, early sexual activity, and other health risk behaviors. As a result of opportunities and reinforcements experienced in social groups that model, condone, or approve of these behaviors, individuals may be encouraged to engage in such behaviors (Bourgois, 1995).

Norms that assert that "school is a White thing" or that academically successful adolescents are "nerds" denigrate achievement and contribute to academic failure. Schools must counteract these norms to be successful in promoting achievement of students. This suggests one reason that involving parents in school life is important. A goal of parental involvement is to build consensus about the importance of academic achievement and school success for children between parents and schools. The society cannot afford inconsistency between schools and families regarding norms about the importance of a good education.

This view of the etiology of school achievement and health risk behaviors suggests that the development of a social bond of commitment and attachment to schooling by students is, in part, a responsibility of schools. This is accomplished through the provision of appropriate opportunities for active participation and skill development and the use of appropriate reinforcement for skillful performance both inside and outside the classroom. The development of bonding to school is essential both to ensure successful academic achievement and to create the motivation to live according to norms or standards for healthy behavior promoted by school personnel (i.e., non-drug use, nonviolence, abstinence from early sexual activity and unprotected sex, etc.).

From this perspective, the promotion of social, emotional, and physical wellness in the schools is more fundamental than a new curriculum laid on top of the three Rs. The promotion of social, emotional, and physical wellness is a function of the way teachers manage and teach in their classrooms and on playgrounds. Schools that fail to create the conditions that bond students to school fail to promote a strong protective factor against health risk behaviors.

In this context, the importance of strong positive leadership of the school becomes apparent. School leaders must clearly establish expectations for behavior. Leaders must express explicit commitment to strong academic performance, setting high expectations for all staff and all students. At the same time, school leaders must assert and maintain standards for healthy behavior for schools to become "free of drugs, violence, and the unauthorized presence of firearms and alcohol" (National Education Goals Panel, 1995, p. 13). Establishing, exemplifying, and enforcing high academic expectations and behavior standards are primary functions of school leaders.

Yet it is also clear that the task of establishing and maintaining high standards is best accomplished by using social development processes to ensure that those affected by the standards will be committed to upholding them. If expectations are developed through a process that extends opportunities for active involvement to include faculty, staff, students, and parents; if the endeavor helps develop skills for participation in the process; and if those who participate are recognized for their participation, commitment to the school and its standards and their maintenance should be broadened (Mortimore, 1995). This is consistent with the emphasis on joint planning and faculty cohesion identified as a characteristic of effective schools (Levine & Lezotte, 1990). In sum, school leaders can act to establish clear, high standards for academic performance and student behavior and to promote commitment and attachment to school among staff, students, and their families.

Effective Interventions to Promote Academic Success and Healthy Behavior

What do researchers know about practices that promote the previously discussed academic and behavioral outcomes? Clearly,

cognitive, emotional, and social development begins before birth and is affected by factors and experiences from conception onward (Institute of Medicine, 1994). Effective interventions for promoting children's academic success and healthy behaviors are not confined to K-12 schools. Interventions with economically disadvantaged mothers during pregnancy and their children's infancy, interventions for low birth weight and preterm babies, and early childhood education and family support interventions before children enter the elementary grades have shown positive effects on the cognitive development of children (Hawkins, Catalano, & Brewer, 1995; Institute of Medicine, 1994; Kagan & Neuman, 1997). This chapter, however, is limited to discussion of school-based interventions that promote academic performance during the elementary and secondary grades. The focus is on practices and policies of schools and classrooms that have been shown to be effective in promoting academic achievement and healthy behavior.

Classroom Interventions

Teaching is fundamental to the academic development of children. The research on teaching is extensive. Significant literatures are focused on the teaching of specific subject matters, on teaching to different learners, on teaching for different developmental stages, and on teaching methods themselves (see Berliner & Calfee, 1996; Wittrock, 1986). I do not attempt to summarize that literature here but rather illustrate practices shown to be effective for promoting achievement and healthy behavior.

Good teaching begins with good classroom management. There is strong experimental evidence of the effectiveness of behavioral techniques for classroom management, such as the establishment of clear rules and directions, the use of contingent approval and reinforcement, and the involvement of students in specifying contingencies and reinforcing themselves (O'Leary & O'Leary, 1977). Proactive classroom management strategies are aimed at establishing an environment that is conducive to learning and that promotes appropriate student behavior and minimizes disruption to classroom activities (Cummings, 1983). Proactive classroom management requires that teachers act in advance to anticipate and avoid classroom discipline problems in managing entire groups or classes of students. Classroom routines are established at the beginning of

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the year to create consistent expectations for both academic and social behavior for all students in the classroom. Teachers and students develop clear and explicit expectations for behavior, for teacher monitoring of behavior, and for consequences of acceptable and unacceptable behavior. Teachers recognize students' attempts to meet these expectations with frequent, appropriate specific encouragement or praise that identifies the student behavior being rewarded. Teachers also use strategies such as "the law of least intervention" for keeping minor classroom disruptions from interrupting instruction and decreasing opportunities for learning.

Intervention studies have shown that teachers can learn to use proactive classroom management methods and that their use produces less student misbehavior in class and more on-task academically focused behavior (Evertson, 1985; Evertson, Emmer, Sanford, & Clements, 1983; Kellam & Rebok, 1992). By promoting clear expectations for both academic and social behavior that are firmly, fairly, and consistently enforced; by involving students in developing behavioral standards for the classroom and emphasizing personal responsibility for adhering to them; and by consistently using incentive and rewards, proactive classroom management illustrates a number of the characteristics of effective schools (National Education Goals Panel, 1995). It also illustrates the use of social development processes to increase commitment to learning and adherence to classroom expectations for behavior.

With regard to classroom instruction itself, continuous progress instruction and cooperative learning methods have been found to be consistently effective across a number of studies in increasing academic success for elementary grade students at risk of failure (Slavin, Karweit, & Madden, 1989; Slavin, Karweit, & Wasik, 1994). Continuous progress instruction is a form of mastery-based learning in which students proceed through a defined hierarchy of skills and are tested at each level to assess their readiness to advance. Corrective instruction and tutoring are provided for those who need it to achieve mastery of a skill. Teachers deliver most instruction to groups of students at the same instructional level who may be grouped or regrouped for instruction depending on their skills in different subjects.

In cooperative learning, after teachers have provided instruction to groups of students or the class as a whole, students work in learning teams composed of four or five members of mixed skill

levels, to help each other learn and to assess one another's progress in preparing for tests and teacher assessments. Students are tested individually but contribute to team recognition if their scores show increasing mastery, thereby increasing motivation to help teammates learn. Cooperative learning provides opportunities and reinforcement for active involvement of all children in academically focused learning groups in the classroom. Positive effects of cooperative learning on achievement have been shown in both short- and long-term experimental tests in elementary schools and in short-term tests in secondary schools (Slavin & Madden, 1989).

In social development terms, both continuous progress instruction and cooperative learning methods increase opportunities and reinforcement for active involvement in schooling, which should, in turn, increase academic achievement and commitment to learning. Both methods seek to increase time allotted to instruction and learning and to provide opportunities for practice to achieve mastery (that is, opportunities for active involvement in learning), to provide a structured hierarchy of learning tasks adjusted to students' current levels of skills, and to use frequent monitoring of student progress both to allow for adjustment of instruction and to provide specific information for recognition and reinforcement of student progress.

A related approach to improving achievement has been to change the demographics of instruction, that is, to alter the number and/or characteristics of students being instructed by a teacher. Reductions in class size have been advocated, for example, to provide greater opportunity for student-teacher interaction for each student. Tutoring is an extreme example of this in which the student-teacher ratio is reduced to one-to-one. Academic achievement has been affected consistently and positively by one-on-one tutoring of elementary students. Tutoring by older students, adult community volunteers, trained paraprofessionals, and certified teachers has produced substantial long-term improvements in students' achievement in reading and math (Wasik & Slavin, 1994). Positive results of tutoring have been found regardless of whether the tutoring was preventive or remedial, or structured or unstructured, in design. Tutoring provided by other students has positive effects on both tutors' and tutees' academic achievement and attitudes toward the subject covered across all achievement levels (Cohen, Kulik, & Kulik, 1982). Tutoring of elementary grade students has been shown to

positively affect achievement for 2 years following tutoring (Coie & Krehbiel, 1984; Greenwood, Terry, Utley, Montagna, & Walker, 1993).

In social development terms, one-on-one tutoring provides extensive opportunities for active involvement and interaction focused on learning and provides a source of immediate and continuous reinforcement for effort and improvement in performance. When delivered by other students, tutoring provides these conditions for both tutors and those being tutored, and both have benefited academically from tutoring.

With respect to reductions in class size more generally, Slavin's (1990a) meta-analysis showed that substantial reductions in class size (greater than 20%) had small positive effects on reading achievement in kindergarten and first grade. Reductions in class size at later grades, however, have produced no reliable effect on achievement.

Another example of the approach of changing the demographics of instruction is grouping students for instruction on the basis of ability. Ability grouping across classes and grades for reading in the elementary grades has shown consistent moderate positive effects on reading achievement. Ability grouping for mathematics instruction in the middle and late elementary grades has also shown moderate positive effects (Slavin, 1987). Ability grouping in secondary schools, however, has not shown consistent positive effects on achievement (Slavin, 1990b).

A final example of this approach is the use of diagnostic-prescriptive pullout strategies for students in need of remedial instruction. Again, where specific learning needs are clearly identified and instruction appropriate to these needs is given by a teacher to individuals or small groups of about three to eight students, positive effects on achievement have been consistently observed (Madden & Slavin, 1989).

Methods of classroom management, instruction, and regrouping for instruction have been combined in classroom-based interventions focused on promoting academic achievement and reducing behavior problems of children. Two examples are described here: Success for All (Madden, Slavin, Karweit, Dolan, & Wasik, 1993; Slavin et al., 1995) and the Seattle Social Development Project (Hawkins, Catalano, Morrison, et al., 1992).

The Success for All program developed by Slavin et al. (1995) combines continuous progress instruction, one-on-one tutoring, and cooperative learning methods with other intervention methods to improve the academic success of children in the elementary grades. The comprehensive intervention seeks to enable all students to achieve academic success by providing a half-day preschool and/or a full-day kindergarten focused on language development and academic and social readiness, followed in the primary grades by small-group reading instruction using an empirically based reading curriculum and cooperative learning methods. Students are assessed by teachers every 8 weeks to reconstitute ability-based reading groups and determine which students should receive individual tutoring in 20-minute daily sessions provided by certified tutors focused on helping students master the reading curriculum. In addition, a family support team involves parents in actively helping their children to succeed academically by supporting learning at home. A representative school advisory committee oversees the program.

Evaluations of the Success for All intervention have shown positive effects on achievement, as measured by reading tests, by reductions in special education placements, and by reductions in rates of retention in grade, with greatest effects shown for those children initially in the lowest quartile of achievement (Madden et al., 1993; Slavin et al., 1995).

Explicitly guided by the social development model, the Seattle Social Development Project was a multicomponent intervention designed to prevent delinquency and other problem behaviors. The project employed a package of classroom management and instruction methods in the elementary grades including cooperative learning, proactive classroom management, and interactive teaching (Hawkins, Catalano, & Morrison, et al., 1992; O'Donnell, Hawkins, Catalano, Abbott, & Day, 1995).

Proactive classroom management consisted of establishing expectations for classroom behavior; using methods of maintaining classroom order that minimized interruptions to instruction and learning; and giving frequent, specific, and contingent praise and encouragement for student effort and progress. Interactive teaching involved clear specification of learning objectives, continuous monitoring of students, and remediation, requiring students to

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master specific learning objectives before proceeding to more advanced work. Structured cooperative learning groups were used in experimental classrooms from grades 2 through 6. In the experimental intervention, teachers of the elementary grades were trained to use these three methods of instruction. These methods were tested in combination with a social competence curriculum and parent training during the 6 years of elementary school.

The intervention was tested with a multiethnic urban sample. By the end of grade 2, boys in intervention classrooms were rated as significantly less aggressive than boys in control classrooms (Hawkins, Von Cleve, & Catalano, 1991). By the beginning of grade 5, experimental students were significantly less likely to have initiated delinquent behavior and alcohol use than were controls (Hawkins, Catalano, Morrison, et al., 1992). By the end of grade 6, intervention boys from low-income families had significantly greater academic achievement, better teacher-rated behavior, and lower rates of delinquency initiation than did control boys from low-income families (O'Donnell et al., 1995). A 6-year follow-up at age 18 found significantly higher achievement and lower rates of lifetime violent delinquent behavior among children exposed to the full intervention compared with controls (Hawkins et al., 1996). The studies summarized here provide consistent evidence that interventions to improve classroom management and teaching practices in elementary schools can promote the academic performance of students, including those at greater risk of academic failure and health compromising behaviors.

To this point, I have reviewed innovations that seek explicitly to enhance the academic success of children. There is some evidence that the teaching of social and emotional skills in schools also can have long-term effects on academic achievement (Elias, Gara, Schuyler, Brandon-Muller, & Sayette, 1991). The Improving Social Awareness-Social Problem Solving project sought to promote social and emotional competence in elementary school children through an instruction and application phase. In the instruction phase, teachers used scripted lessons involving the following steps: group sharing of interpersonal problems, successes, and feelings to create a mental set for the lesson; teacher-led presentation of the cognitive, affective, and behavioral skills to be taught; written and video presentations modeling use of the skills in applicable situations; class discussions of the situations and ways to use the new skills;

role playing of the skills by students; and summary and review. In the application phase, teachers encouraged students to problem solve difficult interpersonal encounters and to use the skills in daily situations confronted in the classroom and other environments. In a quasi-experimental study, this problem-solving skills program in grades 4 through 6 was followed by positive effects on academic achievement at grade 10 (Elias et al., 1991).

The social development model suggests that the successful development of skills for participation in the classroom contributes to the development of commitment to schooling and to academic success. The intervention studies reviewed above used similar methods of instruction to promote the development of cognitive/academic skills and the development of social and emotional skills. Regardless of the skills to be learned, skills are acquired when students are motivated to learn them, when skills are broken into manageable components, when successful performance of the skills is demonstrated or modeled, when students have an opportunity to actively practice the skills, and when they receive specific feedback and reinforcement for their performance of the skills (Stallings & Stipek, 1986; W. T. Grant Consortium on the School-Based Promotion of Social Competence, 1992).

These findings suggest that an important task for schools and teachers is to integrate the teaching of academic and social and emotional skills in the classroom. Two initiatives currently under way seek to accomplish this goal. The Child Development Project conducted by Battistich, Schaps, Watson, and Solomon (1996) seeks to help schools to become

> "caring communities of learners"—social contexts in which all students feel supported and valued, can actively participate in and contribute to school life, and where there is a common commitment not only to learning, but to fairness, respect, responsibility, and concern for others. (p. 8)

The project uses cooperative learning; proactive classroom management methods that seek to foster responsibility, establish prosocial norms, and strengthen conflict resolution skills; classroom and schoolwide community building activities; activities for students and parents to do at home together; and a literature-based language

arts program that emphasizes students' critical thinking about relevant social and ethical issues.

A longitudinal, multisite quasi-experimental test of the Child Development Project involving 12 intervention and 12 comparison elementary schools across the United States found significant increases in student attachment and commitment to school and academic achievement, increases in conflict resolution skills and prosocial behaviors, and significant reductions in alcohol use among fifth and sixth grade students (Battistich et al., 1996; Battistich, Solomon, Watson, & Schaps, in press).

In Raising Healthy Children, a third-generation intervention study growing from the Seattle Social Development Project, Catalano, Haggerty, and their colleagues are testing methods for integrating five classroom strategies for promoting academic, social, and emotional growth through the use of integrated curricula. The Raising Healthy Children project is an experimental test of these strategies involving all first- and second-grade children in five experimental and five control schools. The strategies include (a) proactive classroom management; (b) use of effective instructional techniques including motivational and active student involvement in learning activities; (c) interpersonal and social problem-solving skills training; (d) cooperative learning methods; and (e) reading strategies that balance guided reading, shared reading, reading aloud, and reading alone. Because children often come to the classroom unprepared for the social environment in which learning occurs, and because cooperative learning techniques require interpersonal and problem-solving skills for successful implementation, a major focus of the teacher training intervention is on helping teachers integrate social and emotional skills into the classroom environment and curricula. During teaching workshops, teachers identify how to integrate interpersonal and problem-solving skills training into the daily schedule.

Participating elementary school teachers identified these interpersonal skills as prerequisites to academic success: listening, how to give compliments, problem solving, anger management, recognizing and sharing feelings, tattling versus reporting, and manners. Literature units have been created to assist in skill development through direct instruction, practice, reinforcement, and generalization. The units are designed to be used in conjunction with the Get-Along series (Cummings, 1993), a set of interpersonal and

problem-solving skill storybooks for children in the primary grades that are integrated with reading units. Each unit takes approximately 1 month to teach, including an introductory lesson and 5- to 10-minute lessons for the following days. Teachers plan and practice integrating social and emotional skills training into the reading curriculum. Teachers use a variety of short activities, designed to eliminate dead time during transitions to keep the focus on the social and emotional learning environment of the classroom. For example, while focusing on listening and waiting for the recess bell to ring the teacher asks, "Let's brainstorm all the times you will need to listen in one day." As students develop, social skills are highlighted in conjunction with reading assignments. For example, third graders reading *Charlotte's Web* learn to map Wilbur's social network and then to ask, "Who are good friends and who aren't such good friends?" Fifth-grade students focus on journal writing their feelings as if they were Philip, the main character in their reading novel, *The Cay*. Teachers also use class meetings to facilitate problem solving and discuss relevant issues regarding the classroom learning environment.

One day of instruction is provided to teachers for each of the five Raising Healthy Children strategies, 1 to 2 years before children in the study panel enter their classrooms. Teachers practice using the skills in the classroom and are provided coaching and advanced workshops in each topic.

After 1.5 years of exposure of the study panel to these integrated teaching practices, academic and behavior outcomes have been examined, using hierarchical linear modeling of growth and level differences between experimental and control groups. In the academic area, students in the experimental condition have shown significantly higher commitment to school and academic achievement. In the behavioral area, both social competency and appropriate social interaction have shown growth and level changes favoring intervention students. Measures of antisocial behavior also have shown significant level and growth differences favoring the intervention group. Experimental students had lower levels of antisocial behavior and decreasing rates compared with increasing growth rates of antisocial behavior for control students (Catalano, Harachi, Haggerty, & Abbott, 1996).

The early results of both the Child Development Project and Raising Healthy Children study indicate that the teaching of aca-

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demic and socioemotional skills can be integrated in the classroom with positive effects on academic achievement, social and emotional skills, and student behavior. Schools are likely to maximize results if they seek to develop both academic and emotional competencies of their students. Development of the cognitive skills required for academic success is accomplished using methods similar to those used for the development of social and emotional skills. High and consistent expectations for behavior must be established. Teaching and learning are done in a way that requires active involvement of the learners, that is, participation with others in tasks and activities requiring both cognitive and interpersonal skills for successful completion. Continual monitoring and reinforcement are essential for learning both types of skills. The best practice is likely to integrate the teaching of both types of skills in planned developmental sequences that complement each other.

Schoolwide Approaches

Although classrooms are environments of social development for students, classrooms are nested in schools that by virtue of their leadership and organizational arrangements affect expectations and standards, opportunities and rewards, and the degree of consistency in these across the school. Several investigators have intervened to change the organization of schools to make them more effective.

Comer (1988) developed a comprehensive elementary school intervention involving four components: (a) a social calendar that integrated arts and athletic programs into school activities; (b) a parent program in support of school academic and extracurricular activities that fostered interaction among parents, teachers, and other school staff; (c) a multidisciplinary mental health team that provided consultation for school staff in managing student behavior problems; and (d) a representative governance and management team composed of school administrators, teachers, support staff, and parents that oversaw the implementation of the other three components. A number of elements of the intervention, including the active involvement of parents, illustrate the elements of effective schools listed earlier. Originally implemented in two New Haven inner-city elementary schools serving predominantly African American children from families in poverty, the intervention is now widely used. From a social development perspective, by providing

greater opportunities for teachers, other school staff, and parents to interact and to become involved in clarifying and setting expectations through governance and management activities, the intervention should create greater commitment to schooling among all involved and establish shared high expectations for student achievement and behavior.

Follow-up studies of students from the original intervention elementary schools and matched comparison students have shown significantly better middle school grades, achievement test scores, and self-rated social competence in intervention students when compared with matched comparison students (Cauce, Comer, & Schwartz, 1987; Comer, 1988).

Gottfredson (1986) evaluated a comprehensive school organization intervention for secondary schools in low-income, predominantly African American areas in Charleston County, South Carolina. The six main components were (a) teams composed of teachers, other school staff, students, parents, and community members that designed, planned, and implemented school improvement programs, with the assistance of two full-time project staff; (b) curriculum and discipline policy review and revision, including student participation in the development of school and classroom rules and continuing in-service training for teachers in instructional and classroom management practices; (c) schoolwide academic innovations, including study skills programs and cooperative learning methods; (d) schoolwide climate innovations, including expanded extracurricular activities, peer counseling, and a school pride campaign intended to improve the overall image of the school; (e) career-oriented innovations, including a job-seeking skills program and a career exploration program; and (f) special academic and counseling services for students who were low achieving and disruptive.

The intervention was implemented and evaluated for 2 years in three middle schools and for 1 year in three high schools. A middle school and a high school served as comparisons in the quasi-experimental design. Although the general population of students in intervention schools significantly improved in grades, alienation, attendance, and self-concept, these changes were matched by similar improvements on these outcomes among students in comparison schools. Because Gottfredson does not directly compare the experimental and comparison schools, it is difficult to ascertain the effects

of the schoolwide intervention. The low-achieving and disruptive students in intervention schools who received special academic and counseling services, however, scored significantly higher on standardized tests of basic academic skills and were significantly less likely to report drug involvement or repeat a grade than were control group students in the experimental school. Seniors who received these services were significantly more likely to graduate (76%) than were seniors in the corresponding control group (42%). There were no significant differences, however, between students who received special services and control students on delinquency, court contacts, or other educational or behavioral measures. Probably the clearest implication from the Gottfredson (1986) study is that in the context of a whole-school improvement effort, selective and indicated preventive interventions with students at greatest risk of school failure and health-compromising behaviors can have beneficial effects on academic success and on a major health and education goal, that is, high school completion, even when implemented late in development.

Gottfredson has continued to develop and test schoolwide interventions that seek to reduce health-compromising behaviors by increasing commitment to education. In 1987, she reported results of a schoolwide intervention implemented in the context of the Program Development Evaluation organizational development activity. The school improvement activities consisted of training for teachers in classroom management techniques and cooperative learning as well as a parent volunteer program, a community support and advocacy program, and other components from the Charleston project. Although no direct comparisons were made between the experimental and comparison groups, the evaluation indicated that when the intervention was well implemented, students reported significantly more rewards from academic involvement and less delinquent and rebellious behavior than did comparison school students (Gottfredson, 1987).

Felner and his colleagues (1993) have implemented broader interventions seeking to ease the transition to high school to create greater bonding to school among students from disadvantaged low-income backgrounds. Students entering ninth grade were assigned to units of 65 to 100 students in a "school within a school." Homeroom and academic classes were composed only of students in the same unit, and classrooms for the same unit were located in

proximity to each other. Academic subject teachers also served as homeroom teachers and as the main administrative and counseling link between the students, their parents, and the rest of the school. Homeroom teachers contacted parents before the school year and also held brief check-in sessions with homeroom students once a month.

The intervention increased bonding to school. Experimental students had significantly more positive perceptions of school, teachers, and other school personnel than did comparison students at the end of the yearlong intervention. Moreover, intervention students showed significantly smaller decreases in academic performance and attendance during the transition between junior and senior high school. With respect to the *Healthy People 2000* goal of high school completion, intervention students had a significantly lower dropout rate (24%) than did comparison students (43%).

The Comer, Gottfredson, and Felner intervention studies provide evidence that elementary and secondary schools can be reorganized to achieve key characteristics of effective schools. Each of these interventions explicitly involved faculty in more joint planning and the use of consistent approaches toward students, emphasized learning, and explicitly involved parents more actively in school life and the education of their children.

This summary of research evidence on effective interventions to promote achievement, emotional competence, and prosocial behavior shows that there are tested methods for installing the characteristics of effective schools in other schools. When key policies and practices in schools and classrooms are changed, student achievement, social and emotional competence, and behavior improve. There is evidence that this can be accomplished in schools serving disadvantaged and minority populations.

Conclusion

At the present, the United States is not achieving the health and education goals of academic achievement that we have set for ourselves as a society. In 1990 and again in 1994, 86% of 19- to 24-year olds had obtained high school credentials, indicating little movement toward the goal of 90% (DHHS, 1995). Other measures of the academic competence of students in the United States show

greater reason for concern. Goal 3 of the National Education Goals Panel (1995) asserts,

> By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy. (p. 11)

The 1995 National Education Goals Panel scorecard showed less than a third of students reading at the performance standard for grades 4 and 8 and no increase in this rate since 1992. No more than a quarter at grades 4, 8, or 12 were achieving at standard in mathematics at the most recent assessment. Other subject areas showed similar results.

High-quality public education that guarantees success for all children, regardless of race or socioeconomic status, is feasible. This society has developed the technology to organize schools and classrooms to promote academic achievement, emotional competence, and healthy behavior of students. But to make it happen, everyone has to want to do it.

That includes parents expecting more from public education but also doing more to be actively involved in the schools, classrooms, and learning experiences of their children. It includes teachers working together to master management and instructional methods that promote more active involvement of students as learners and that promote the development of reasoning and problem-solving skills for both academic and social problems.

It includes school administrators who view their role as leadership in the creation of a community of commitment to learning and positive social development through the communication of high expectations for achievement and behavior; the modeling of instructional and personal leadership; and the development of opportunities and recognition for involvement of parents, students, teachers, helping professionals, and community residents in the life of the school. It includes central administrative systems that ensure access for school leaders and staff to the best practices for school

and classroom management, instruction and organization, and reinforcement for change in pursuit of excellence.

Most of all, it includes a public that is serious about education. Taxpayers should be entitled to expect schools to use the best methods available to organize and manage themselves so that students achieve academic and social competence and avoid health-compromising behaviors.

Schools should be provided the resources to do that and the flexibility to organize and manage their activities to achieve the academic outcomes, emotional competencies, and behavioral standards they and the taxpayers seek as outcomes. Schools should, in turn, be accountable for implementing improvements that can be expected to achieve the specified outcomes and for monitoring student progress related to these goals.

Taxpayers should be prepared to provide resources to support the changes in schools that can make a difference. All the effective interventions reviewed here involved costs, some more than others. Teaching, itself, must again be valued in the society, both financially and as a calling.

Today, nations across the world disintegrate into ethnic and religious struggles while others overtake the United States with cost-efficient production and manufacturing. It is hard to imagine that this society can ensure its future cohesiveness in the face of increasing diversity and promote its competitiveness in the world economy without a healthy and effective system of universal public education. We should stop arguing about this and secure its creation using the tools at hand and committing the resources necessary. We can and should ensure that all American public schools are effective in promoting the academic competence, emotional competence, and healthy behaviors of all students.

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